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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,595	10/22/2003	Stefano Enea	Q77983	6369
23373	7590	05/18/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			DUPUIS, DEREK L	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/689,595

Applicant(s)

ENE A ET AL.

Examiner

Derek L. Dupuis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-14 is/are rejected.
- 7) ☒ Claim(s) 4-7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/22/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/22/2003 has been considered by the examiner.

Drawings

3. The drawings received on 10/22/2003 are accepted by the examiner.

Specification

4. The disclosure is objected to because of the following informalities: the title portion of page 1 should be retyped as it appears that the letter "o" was left out in several words. In line 1 of paragraph 6 of page 1, the word "lenght" should apparently be "length". In line 2 of the second bullet on page 4, the word "wavelenghts" should apparently be "wavelengths". In line 5 of page 6, the word "With" should apparently be spelled "With" ("i" in lowercase form).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-3 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Persson (US 6,519,384 B2)* and further in view of *Tervonen et al (US 2002/0071156 A1)*.

7. Regarding claim 1, Persson teaches a method for optimizing the sequence order of optical passive filters in a WDM multi-channel transmission system to optimize the minimum span length between nodes (see abstract). Persson teaches that the optical passive filters make up mux/demux structures at nodes of the WDM system (see figure 2). Persson teaches that the sequence is based on the insertion loss profile of the WDM system (see abstract, and column 1, line 65 to column 2, line 40) but does not teach that the sequence of the filters is determined based on the attenuation profile of the WDM system. Tervonen et al teach a method for optimizing the sequence order of optical filters in a WDM system based on the attenuation profile of the system and on the insertion loss profile of the system (see paragraphs 5-17 and 27).

8. Regarding claim 2, Persson in view of Tervonen et al teach a method as discussed above in reference to claim 1. Tervonen et al teach that a number of parameters of the WDM system are set and that the attenuation profile over the channels of the system are defined (see paragraphs 5-17). Based on the attenuation profile the sequence order is derived and based on the loss profile of the channels the minimum span length is optimized (see abstract of Persson).

9. Regarding claim 3, Persson in view of Tervonen et al teach a method as discussed above in reference to claim 2. Persson teaches that the method can be performed for any number of intermediate nodes (see column 1, line 61 to column 2, line 40).

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10. Regarding claim 9, Persson in view of Tervonen et al teach in Figure 2 of Persson and figure 1 of Tervonen et al a mux/demux structure of passive optical filters for WDM that are obtained using the method discussed above in reference to claim 1.

11. Regarding claims 13 and 14, Persson in view of Tervonen et al teach a method as discussed above in reference to claim 1. It is routine practice in the art to use computer code means to perform desired methods and to run the code on a computer or to store the code on a computer readable medium.

12. Regarding claims 8, Persson teaches a device shown in figure 2 that comprises a mux/demux structure of optical passive filters for a WDM multi-channel transmission system. Persson teaches that the sequence order of the filters is determined to optimize the minimum span length between the nodes of the system (see abstract). Persson teaches that the sequence is based on the insertion loss profile of the WDM system (see abstract, and column 1, line 65 to column 2, line 40) but does not teach that the sequence of the filters is determined based on the attenuation profile of the WDM system. Tervonen et al teach system where the sequence order of optical filters in a WDM system is based on the attenuation profile of the system and on the insertion loss profile of the system (see paragraphs 5-17 and 27).

13. Regarding claim 10, Persson in view of Tervonen et al teach a device as discussed above in reference to claim 8. Persson teaches that the filters are three port filters in figure 2 and that pass band thin film filters (see column 1, lines 37-45).

14. Regarding claims 11 and 12, Persson in view of Tervonen et al teach in figure 2 of Persson and figure 1 of Tervonen a WDM multi-channel transmission system

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comprising the mux/demux structures as discussed above in reference to claim 8.

CWDM is a routinely used variation of WDM.

15. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Persson by basing the sequence of the filters on the attenuation profile and the insertion loss profile of the system. Motivation to do this would be to reduce the total attenuation of the system (see paragraphs 26 and 27 of Tervonen et al). Furthermore, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

16. Claims 4-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter:

18. Claims 4-7 are allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a method for optimizing the sequence order of optical filters in a WDM system so as to maximize the minimum span length between nodes of the system where the following parameters are used to determine the sequence order: the number of channels, the fiber loss profile, the set of wavelengths, the insertion loss model, the span length target, the power budget, and the number of intermediate nodes in combination with the rest of the claimed limitations.

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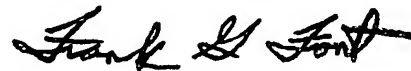
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek L. Dupuis whose telephone number is (571) 272-3101. The examiner can normally be reached on Monday - Friday 8:30am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derek L. Dupuis
Group Art Unit 2883



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800